

***United States Court of Appeals
for the Second Circuit***



**BRIEF FOR
APPELLEE**

74-1050

In the
United States Court of Appeals
FOR THE SECOND CIRCUIT
No. 74-1050

THE GENERAL TIRE & RUBBER COMPANY,

Plaintiff-Appellant,

vs.

JEFFERSON CHEMICAL COMPANY, INC.,

Defendant-Appellee.

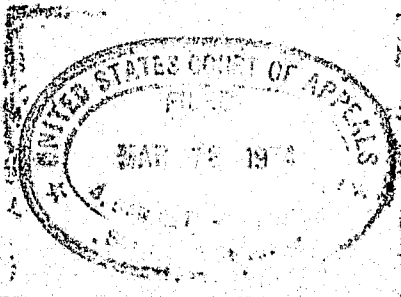
On Appeal from a Judgment of the United States District
Court for the Southern District of New York

BRIEF FOR DEFENDANT-APPELLEE

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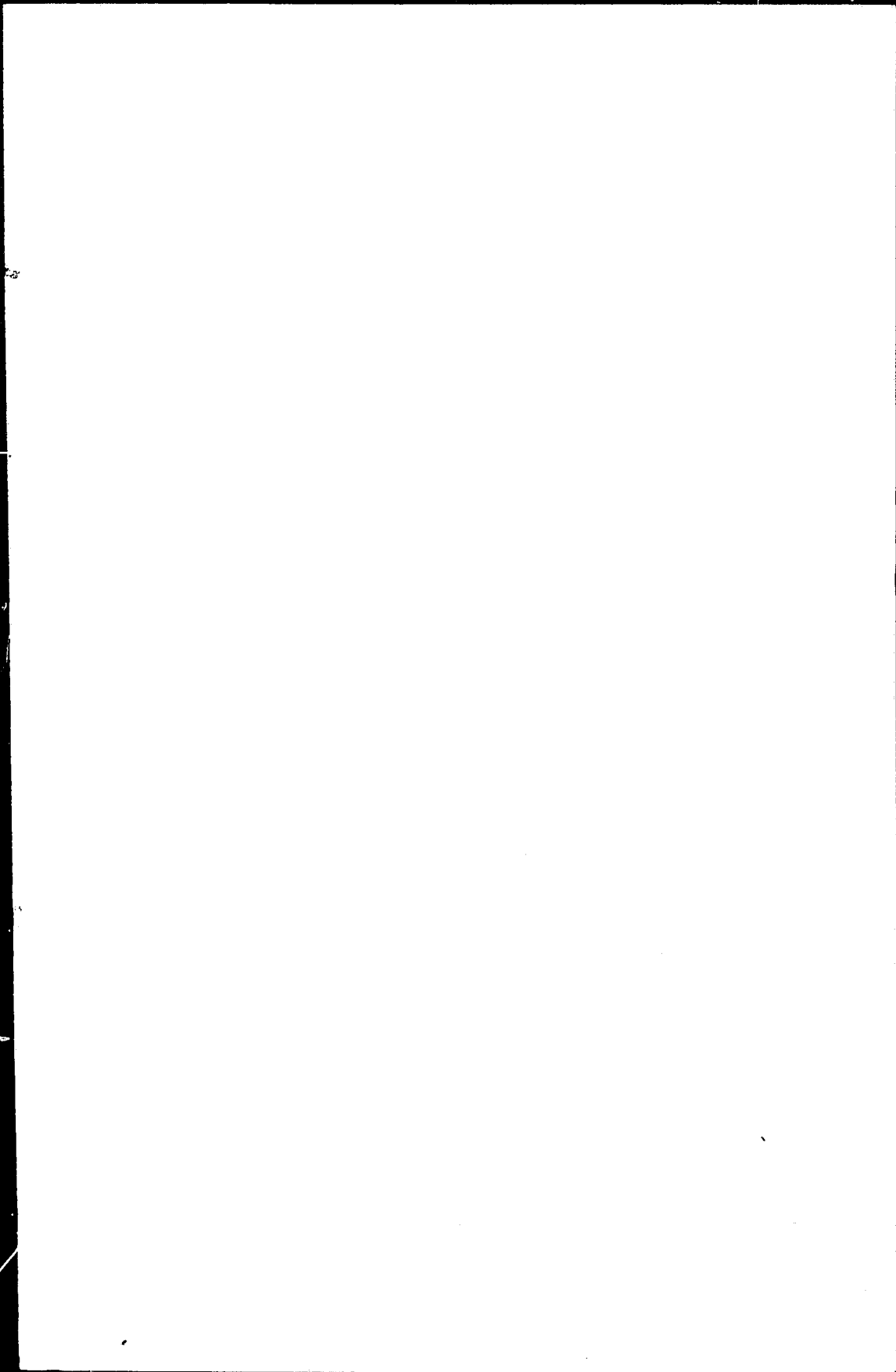


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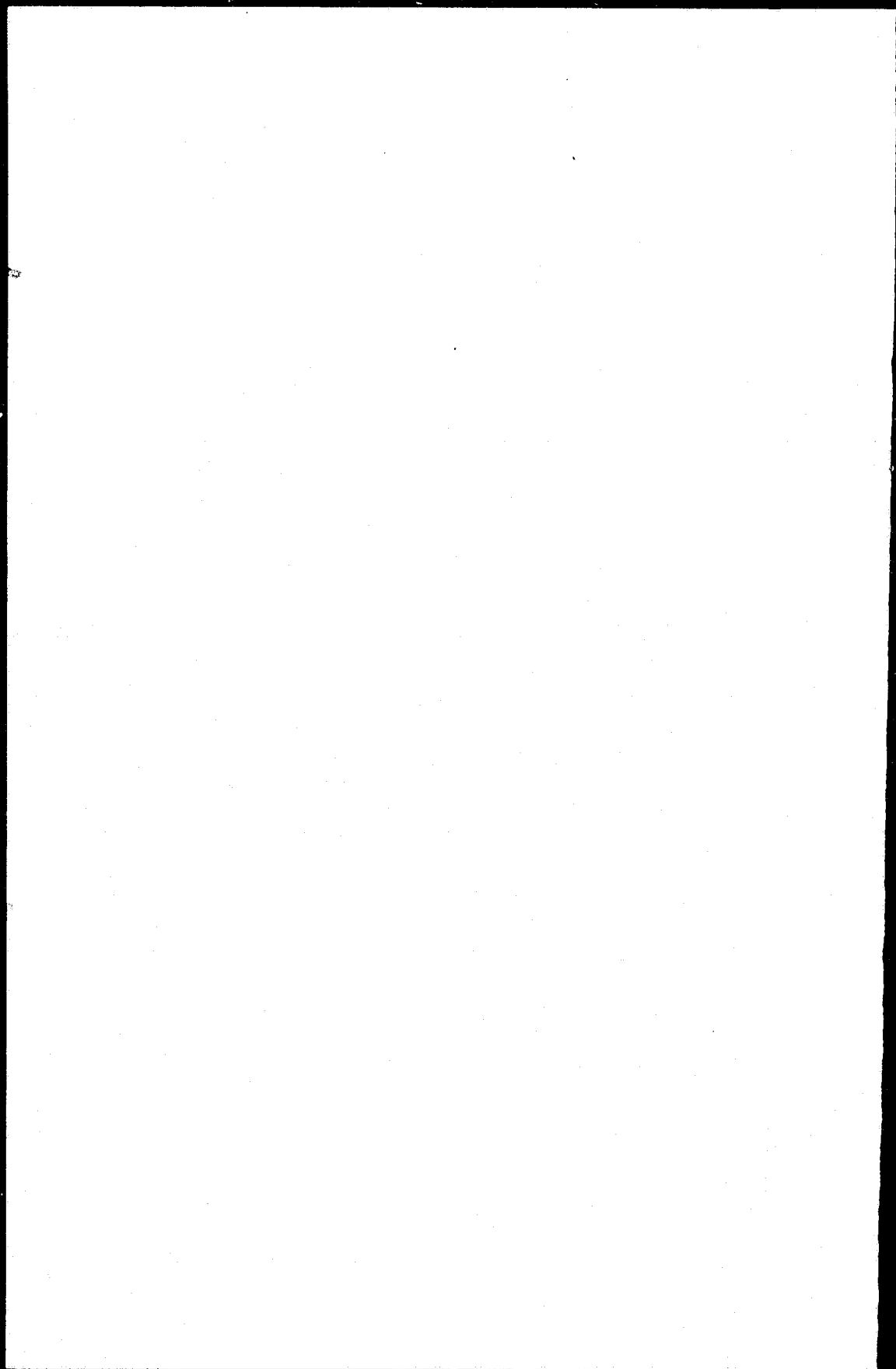
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ISSUES PRESENTED FOR REVIEW

General presents *no* real Issues for Review. We submit the issue is whether the district court's decision was based upon findings of fact supported by substantial evidence and upon a correct application of the law.

The findings, conclusions, and opinion are set out at 14a-33a of the Appendix. They are also reported at 363 F.Supp. 371. These are the proper starting points for appellate review.

STATEMENT OF THE CASE.

General's statement of the case in its brief is misleading in that it relates merely half the story. Accordingly, Jefferson is compelled to enlarge on the statement of the case.

The Heiss Patent

The Heiss Patent involves processes for making various polyurethane products, such as adhesives, sealants, protective coatings and foams. (PX-1, 501a) The Heiss patent in suit is admittedly infringed by General. (DX-AK, 1057a)

More specifically, the patent covers a process for making foams by reacting a condensate of propylene oxide and a polyol such as pentaerythritol having three or more hydroxyl groups (triol or tetrol) with an excess of polyisocyanate.¹ (PX-1, 503a) The Patent has both product and process claims.

The Heiss polyurethanes are not water sensitive and, as such, are very useful. (PX-1, 501a-502a, Col. 1, lines 17-21) The Heiss Patent specification states:

"The products of this invention are suitable for casting or pouring into intricate forms or crevices and are adapted for use in numerous applications, for example, as adhesives, protective coatings, components of insulating coatings, impregnants for fibrous materials to impart water resistance, flame resistance and improved hand thereto; as insulating and dielectric elements in transformers, capacitors,

¹ Sometimes the term "diisocyanate" will appear here and in the record. A diisocyanate is the type of polyisocyanate most often used in the industry.

electrical terminals or bushings, cables or other electric devices; and as foamed-in-place resins." (PX-1, 501a; Col. 1, lines 13-21)

Today in the United States one-half billion dollars in sales and one billion pounds of Heiss foams, both rigid and flexible, are produced annually with flexible foams constituting over half the market.² (25a)

Background of the Urethane Industry

Heiss was not the first to work with polyurethanes. Just prior to and during World War II, Professor Otto Bayer and his associates initiated work on a class of polyurethanes which are now known as polyester urethanes to be distinguished from subsequently developed polyether urethanes. (441a-443a) Professor Bayer was able to make foams and adhesives from his materials, however, the polyester urethanes were subject to destruction by hydrolysis. (250a, 364a, 372a, 443a) Moreover, large quantities of diisocyanates were required to cross link the polyesters to produce the polyurethane materials. The diisocyanates were very costly so that the finished product was too costly for extensive commercial exploitation. (250a-251a)

² General owns an earlier patent (DX-A, 840a) issued to Dr. Charles C. Price (hereinafter the Price Patent) which contains subject matter essentially the same as the Heiss patent except that the Heiss claims are broader. The Price patent claims require a particular molecular weight limitation for the propylene oxide condensates, while the Heiss patent claims do not. (42a) The Heiss and Price patents were involved in an interference in the Patent Office on the issue of priority of inventorship (see PX-2, 629a; DX-1, 906a; DX-J, 919a; DX-K, 926a; DX-L, 931a; DX-M, 923a; and PX-27, 799a).

Professor Bayer and his associates (Windemuth and Schnell) then turned their attention to the development of *polyether* urethanes and received U. S. Patent No. 2,948,691 (PX-5, 696a) for their efforts. This development was an advance over the prior *polyester* urethanes because the Bayer *polyether* urethanes, although they were sensitive to water, and swelled or dissolved in water, were not destroyed by water as were the *polyester* urethanes. (261a, 372a-377a) Additionally, less of the diisocyanate was needed in making the *polyether* urethanes so they were less expensive to produce. (250a)

The Bayer organization had done some work in Germany with ethylene oxide condensates of polyols and had cross linked them with diisocyanates to produce a *polyether* urethane product. Heiss also worked on these materials but Heiss went further. Heiss had another material, which was not available at the time, specially prepared for him. This material was a propylene oxide condensate of a triol or tetrol. (DX-AH, 1041a-1044a; 261a; 284a-289a) He reacted the condensate with an excess of diisocyanate to produce products which were water resistant. (261a; 308a-309a)

Heiss conceived this *polyether* propylene oxide urethane on November 14, 1951 (DX-AA, 955a; 274a; 284a) and reduced this invention to practice in September of 1952. (DX-AC, 979a; 293a-296a) This is the invention claimed in the Heiss patent.

The Heiss Patent Prosecution History

- o In order to better understand the arguments presented for both sides, it is important to review what occurred in the Patent Office during the period in which the Heiss

patent application was pending. Because of the interference with General's Price patent, this period can be conveniently divided into three prosecution phases:

(1) From the time of filing the Heiss patent application to the declaration of interference between the Heiss application and the Price patent—August 7, 1953 to July 21, 1959;

(2) The interference proceedings between the Heiss application and the Price patent—July 21, 1959 to March 23, 1962; and

(3) From the time that the interference was decided to the issuance of the Heiss patent—March 23, 1962 to September 3, 1963.

Before the Interference

The patent application resulting in the Heiss patent was originally filed on August 7, 1953 as a joint application of Herbert L. Heiss and Dr. James H. Saunders. (507a-535a) The original application disclosed at least four distinct inventions.³

One of the claimed inventions in the original application involved the reaction of two components: (1) a polyol; with (2) an excess of diisocyanate. This invention was initially claimed more broadly than the claims issuing in the Heiss patent in suit because a polyol by definition embraces more than a propylene oxide condensate.

Another of the claimed inventions in the original application involved the reaction of these two broadly defined components in the presence of a liquid plasticizer

³As a result, the original application subsequently was split up into several separate applications and several patents issued. (304a; 308a)

for the purpose of solidifying the plasticizer.⁴ The reason for doing this was that the plasticizer had dielectric properties which would be more useful in a solid composition than in a liquid.⁵ (295a)

Initially the Patent Office rejected all of the claims of the original application. (536a) By amendment, in the period covering 1954 up to and including February 17, 1958 (PX-2, 538a-590a), Heiss, through his attorney, cancelled the broad two component claims, and added narrower two component claims calling for a polyurethane made in part from a polyalkylene oxide condensate of a triol or tetrol. As of January 27, 1958, the Heiss application had these two component claims which covered the instant Heiss patent claims in issue. (PX-2, 569a-588a; 344a-345a)

On December 30, 1958, the Price patent issued on an application filed September 23, 1953. (DX-A, 839a) The Price patent contained narrower two component claims, specifically calling for the reaction between: (1) a propylene oxide condensate having a particular molecular weight; with (2) diisocyanate.

After the issuance of the Price patent, Heiss' attorney examined the claims and believed that the invention disclosed in the Heiss application was substantially identical to the invention claimed in the Price patent. Accordingly, Heiss's attorney sought to provoke a Patent Office interference with the Price patent in order to determine as between Heiss and Price who invented the common subject matter first. (PX-2, 600a-626a; 346a)

⁴ It is admitted that the plasticizer is an inert solvent. (71a; 123a-124a; 134a; 189a-194a; 237a-238a; 295a-296a; 382a-383a)

⁵ This invention is referred to in General's brief as the "three component system".

An amendment was submitted adding two component claims to the Heiss patent application. These claims were substantially the same as some of the claims of the Price patent and specified the condensate of propylene oxide. In an Office Action dated March 5, 1959, the Examiner suggested a better form for the propylene oxide two component claims so that an interference could be provoked. (PX-2, 616a) This suggestion was incorporated in an amendment dated March 24, 1959.⁶ (PX-2, 621a)

The Heiss v. Price Interference

The Examiner declared an interference between the Heiss application and the Price patent in a letter dated July 21, 1959. (629a) Meanwhile, because Saunders did not contribute to the invention remaining in the application (and the Heiss Patent), his name was removed pursuant to the Patent Office Rules. (649a)

On March 31, 1960, Price filed a motion to dissolve⁷ based on two grounds: (1) the specification of the Heiss patent application did not support the molecular weight limitations in the counts (claims in issue in the interference); and (2) the Heiss invention required the use of a plasticizer and, therefore, all of the Heiss claims should recite a plasticizer. General argued in its motion that if the Heiss claims were so written to require a plasticizer, the interference would have to be dissolved. (DX-I, 906a)

⁶ If an applicant desires to provoke an interference with an issued patent he must copy the patent claims substantially verbatim. See Rule 205(a) set forth in Point V of the Argument, *infra*.

⁷ The real issue in an interference is which party invented the common subject matter first. However, in some cases, it must first be decided whether the applicant who copied the patented claim had the technical right to do so. Procedurally, this threshold question is raised in a motion to dissolve which is somewhat analogous to a motion under Fed. R. Civ. P. 12.

On August 15, 1960, Price's motion to dissolve was denied on both grounds. (DX-J, 919a)

On August 22, 1960, Price petitioned for reconsideration of his motion to dissolve. (DX-K, 926a) However, the petition raised only the molecular weight issue. The plasticizer issue was never raised again during the proceedings. On October 3, 1960, Price's petition to reconsider was denied. In the denial, the Windemuth patent which had issued August 9, 1960, was cited for the first time. The Examiner stated:

"The Examiner has taken cognizance of U. S. Patent No. 2,948,691, issued to Windemuth et al. (filed on May 6, 1952) which shows condensates of ethylene oxide and trimethylolpropane or pentaerythritol reacted with an organic polyisocyanate." (DX-L, 933a)

The interference was hotly contested. At the final hearing Price argued that the interference should be dissolved because Heiss could not make the molecular weight limitations. (DX-M, 934a) The Board of Patent Interference Examiners agreed and dissolved the interference on March 23, 1962. (PX-27, 802a-815a; 349a) Therefore, the invention dates of the two parties were never considered. (350a)

After the Interference

On dissolution of the interference, the Heiss application was remanded for further prosecution on the merits. On August 13, 1962, the Examiner in an Office Action formally cited the Windemuth patent. (PX-2, 658a) In that action, the Examiner allowed the propylene oxide two component claims and rejected all of the other claims in view of the Windemuth patent. (660a) All other amendments, the Heiss application issued on September 3, 1963 (PX-1, 501a)

The Prior Art References Relied Upon By General On Appeal

General is relying on the following prior art references in order to show that the Heiss Patent claims are invalid:

A Bayer Article, i.e., "Industrial Application of the Diisocyanates," *Angewandte Chemie*, Vol. 59: 257-272 (Sept. 1947) (Excerpts, pages 1-31, 41). (PX-7A and B, 707a);

U. S. Patent No. 2,948,691, (The Windemuth Patent) issuing August 9, 1960 (PX-5, 696a);

U. S. Patent No. 2,527,970 (The Sokol Patent) issuing October 31, 1950 (PX-6, 702a); and

U. S. Patent No. 2,726,219 (The Hill Patent) issuing December 6, 1955 (PX-8, 740a).

In addition, General relies on the alleged prior work of Dr. Charles C. Price, which ultimately led to the issuance of the Price patent on December 30, 1958 (DX-A, 839a). The Price patent itself is not urged as prior art.

During discovery General stated that the Windemuth patent and the Price work were the best prior art. (DX-AK, 1059a)

All of the above prior art references with the exception of the Bayer article were before the Patent Office during prosecution of the Heiss patent application. The Windemuth patent was directly cited by the Examiner whereas the Hill and Sokol patents were considered by the Examiner when working on the Price patent application and the interference.⁸ (DX-1, 843a; DX-M, p. 6) Of course, the Price work was before the Patent Office because of the interference.

⁸ The same Patent Office Examiner who handled most of the prosecution of the Heiss application also decided the motions in the Price-Heiss interference.

ARGUMENT

POINT I

THE STANDARD OF APPELLATE REVIEW

General presents no serious argument here which was not made, considered, and rejected below. For the most part, General does not even discuss, much less distinguish, the cases relied upon below. It has paid no attention to Fed. R. Civ. P. 52(a), which requires that findings shall not be set aside unless clearly erroneous. General proceeds here as if this were a *nisi prius* court.

The standard of appellate review is clear. Judge Learned Hand in *United States v. Aluminum Co. of America*, 148 F.2d 416, 433 (2d Cir. 1945) discussed what is required in order to reverse a trial judge's findings of fact in a complex case wherein much of the record comprises testimony as in this case.

"What the plaintiff is really asking is that we shall in effect reconsider the whole evidence *de novo*, as though it had come before us in the first instance. The impossibility of that at once appears, if we consider what it would have involved, had the appeal taken its usual course and been heard by the nine justices of the Supreme Court. However, whatever may be said in favor of reversing a trial judge's findings when he has not seen the witnesses, when he has, and in so far as his findings depend upon whether they spoke the truth, the accepted rule is that they 'must be treated as unassailable.' *Davis v. Schwartz*, 155 U.S. 631, 636, 15 S.Ct. 237, 39 L.Ed. 289; *Adamson v. Gililand*, 242 U.S. 350, 353, 37 S.Ct. 169, 61 L.Ed. 356; *Alabama Power Co. v. Ickes*, 302 U.S. 464, 477, 58 S.Ct. 300, 82 L.Ed. 374. The reason for this is obvious and has been repeated over and over again; in such

cases the appeal must be decided upon an incomplete record, for the printed word is only a part, and often by no means the most important part, of the sense impressions which we use to make up our minds. *Morris Plan Industrial Bank v. Henderson*, 2 Cir. 131 F.2d 975, 977. Since an appellate court must have some affirmative reason to reverse anything done below, to reverse a finding it must appear from what the record does preserve that the witnesses could not have been speaking the truth, no matter how transparently reliable and honest they could have appeared. Even upon an issue on which there is conflicting direct testimony, appellate courts ought to be chary before going so far; and upon an issue like the witness's own intent, as to which he alone can testify, the finding is indeed 'unassailable,' except in the most exceptional cases."

This standard is equally applicable regarding findings of fact concerning the validity of a patent. See e.g. *Burgess Cellulose Co. v. Wood Flong Corp.*, 431 F.2d 505, 508 (2d Cir. 1970); *O'Leary v. Liggett Drug Co.*, 150 F.2d 656, 666 (6th Cir.), *cert. denied* 326 U.S. 773 (1945).

General has made no serious effort to show that the findings are clearly erroneous. It does not mention evidence contrary to its positions. Such conduct is not fair to this Court nor to the District Court. As was stated in *Cataphote Corp. v. DeSoto Chemical Coatings, Inc.*, 356 F.2d 24, 26 (9th Cir.), *cert. denied* 385 U.S. 832 (1966):

"Thus, it does not aid appellant's position on review to merely extract that evidence presented which supports its position; rather it must additionally demonstrate that no substantial evidence was presented which supports the district court findings in favor of appellee."

It has become popular for losing parties to seek a trial *de novo* on appeal. This, in our opinion, is a tactic which should be condemned. The appropriate place to raise

these matters is before the judge who made the findings. Yet General made no post trial motion to amend or add to the findings. General is fully entitled to attack any findings it considers clearly erroneous, but it cannot properly attack the findings indirectly by unsupported innuendos that the district judge did not fully consider all submissions below. This is especially true where, as here, the District Court did not adopt either parties' findings or conclusions, but wrote his own lengthy, well reasoned opinion.

If ever there is a case where the statutory presumption of validity is entitled to great weight, it is this one. Many of the issues raised here and in the District Court have been decided against General in the Patent Office. The District Court found:

"I have deliberately set forth the file wrapper history of the prosecution of the Heiss patent and of the Price-Heiss interference at some length. Varying degrees of weight are attached by the courts to the action of the Patent Office. In this proceeding, I must determine *de novo*, independent of the Patent Office action, the validity of the patent in question, but where, as here, some of the same contentions are being made and issues raised which were raised and decided in proceedings in the Patent Office, Judge Mansfield's admonition in *The Ansul Company v. Uniroyal, Inc.*, 301 F.Supp. 273, 280 (S.D.N.Y. 1969) *modified on other grounds*, 448 F.2d 872 (2d Cir. 1971) *Cert. denied*, 404 U.S. 1018 (1972) that 'it is unrealistic to attach any great weight to the allowance of a patent by an overworked staff [in the Patent Office]' seems wholly inapposite." [original emphasis] (22a, n.11)

See e.g., *Georgia-Pacific Corp. v. United States Plywood Corp.*, 258 F.2d 124 (2d Cir.), *cert. denied*, 358 U.S. 884 (1958); *Lyon v. Bausch & Lomb Optical Co.*, 119 F.Supp. 42 (W.D.N.Y. 1953), *mod.* 224 F.2d 530 (2d Cir.), *cert. denied* 350 U.S. 911 (1955).

Further it should be noted that the claims of the Heiss and Price patents cover the same commercial products. General has enjoyed a great deal of success in licensing its Price patent to the billion dollar industry. (198a) When it was General's patent, it was a great and valuable invention. But now General considers the Heiss patent covering the same commercial products to be invalid.

POINT II

PRICE CANNOT BE THE FIRST INVENTOR

In order to render the Heiss patent invalid because of Dr. Price's work, General had the burden of proving that Dr. Price conceived and reduced the Heiss invention to practice prior to Heiss. The District Court found that General failed in its burden of proving earlier invention. (302a) In so doing, the District Court applied the following standard for determining priority:

"The inventor who is first to conceive and reduce his invention to practice is ordinarily awarded priority. *Boyce v. Anderson*, 451 F. 2d 818 (9th Cir. 1971). Conception is the complete mental performance and all that remains necessary is construction. Priority over the application date of another is established when the experiment which predates the application is made sufficiently plain for those skilled in the art to understand it and reproduce it. The notebook in these respects constitutes a contemporaneous record of the inventor's thoughts and actions. See *Townsend v. Smith*, 36 F.2d 292, 295 (C.C.P.A. 1929); *Summers v. Vogel*, 332 F.2d 810, 814 (C.C.P.A. 1964); *Kardulas v. Florida Machine Products Co.*, 438 F.2d 1118 (5th Cir. 1971); *Langer v. Kaufman*, 465 F.2d 915 (C.C.P.A. 1972). However, unless a party can establish to a certainty as absolute as in a criminal case that his data [sic] of conception and reduction to practice preceded the date of the patent application, the application date controls. *Karr v. Botkins Grain & Feed Co.*, 329 F.Supp. 411, 413 (S.D. Ohio 1970)." (29a)

General does not challenge the applicable law but instead attacks the District Court's findings regarding the sufficiency of the evidence.

General presents no showing of why there was sufficient evidence to prove Price's dates. All that appears in its brief is a rehash of the evidence that the District Court considered and found to be lacking. (302a) This evidence does not meet the required standard of proof. See *Ritter v. Rohm & Haas Co.*, 271 F.Supp. 313 (S.D.N.Y. 1967). The District Court had more than enough evidence to support its findings.

A. THERE IS NO COMPETENT DOCUMENTARY PROOF OF PRICE'S WORK

After considering the documentary evidence presented at trial by General in an attempt to establish early invention dates for Dr. Price, the Court found and concluded:

"Dr. Price testified here, as in the interference, that he had the conception of making polyether propylene based urethanes in January 1949, and that he secured from General a grant to permit Dr. Herbst, a graduate student under him at Notre Dame, to work on the project and that in April, 1949, Dr. Herbst succeeded in producing the finished product. Produced at trial were reports of Dr. Herbst in memorandum form from him to Dr. Price which in turn were passed on to General. These records are disjointed and incomplete and do not make explicit that the process here in question was successfully concluded. Other than the unsatisfactory memoranda, initially prepared by Dr. Herbst for Dr. Price and transmitted by him to General, there is nothing to show reduction to practice prior to September 23, 1953, by Dr. Price. Dr. Herbst testified that more thorough records were in a notebook he kept which apparently was destroyed by fire." (29a-30a)

For conception General relies on a letter dated April 7, 1949, from Dr. Price to G. H. Swart referring simply to "propylene oxide rubber". (PX-16, 708a) One skilled in the art could not guess the Heiss invention from a reading of the Price-Swart letter. There is no hint of a condensate of propylene oxide with triols or tetrols and nothing is said about reacting the condensate with an excess of diisocyanate. Thus, this fails as evidence of conception. *Ritter v. Rohm & Haas, Co.*, 271 F.Supp. 313 (S.D.N.Y. 1967); *Townsend v. Smith*, 36 F.2d 292, 295 (C.C.P.A. 1929); *Summers v. Vogel*, 332 F.2d 810, 814 (C.C.P.A. 1964).

General also relies on two progress reports in an attempt to corroborate a reduction to practice of the Heiss invention. (PX-18, 782a; PX-19, 783a) However, there is more than sufficient evidence in the record proving that one skilled in the art could not reproduce the alleged experiments contained in these reports. (DX-D, 855a-870a, 873a-874a, 884a-885a, 894a-295a, 897a-898a; DX-E, 905a; 199a-200a; 225a-230a, 350a, 352a-353a, 397a-399a, 449a-451a)

The insufficiency of Herbst's reports is further supported by Mr. T. A. TeGrotenhuis, who was Price's patent counsel. The District Court found:

"In the Price-Heiss interference the attorney for Dr. Price indicated to him that he did not believe he would prevail on the issue of prior reduction to practice on the basis of proof of experiments at Notre Dame. I agree with this conclusion." (30a, n.16)

B. THE ORAL TESTIMONY IN SUPPORT OF PRICE WAS INSUFFICIENT

The testimony of Jefferson's expert, Dr. Colburn, exposed with mathematical certainty that Price could not have reduced the invention to practice in April of 1949 in that Price's assistant Herbst, who did the work, did not use an excess of diisocyanate which is required by the Heiss invention. (214a-215a, 226a, 398a-402a) General did not even try to refute the precise mathematical calculations of Dr. Colburn.

Moreover, Dr. Colburn testified that if Herbst obtained a solidified product, he could not have been using a propylene oxide condensate of a triol or tetrol as required by the Heiss invention. (392a-398a) Again, an explanation to the contrary has never been offered by General.

General relies on cessation of heat evolution as showing that Herbst's reaction had been completed (446a-448a) and infers from this that the required reaction took place. However, Dr. Colburn testified at trial that the cessation of heat evolution does not show that Herbst reacted the materials required by the Heiss invention. (449a-451a)

Judge Carter's findings are not clearly erroneous. Price is eliminated as prior inventor.

POINT III

THE DISTRICT COURT DID NOT ERR IN CONCLUDING THAT THE HEISS PATENT WAS NOT ANTICIPATED BY THE WINDEMUTH PATENT UNDER 35 U.S.C. §102.

The Windemuth patent is directed to the production of swellable or soluble polyether urethanes by reacting: (1) an *ethylene* oxide condensate; with (2) an excess of diisocyanate. (201a-202a, 355a, 378a) No mention is made of *propylene* oxide condensates or their properties. (139a,

201a-202a, 379a-380a, 389a-390a) The Windemuth specification uses the term "polyalkylene oxide condensate" but the materials described and their properties are those of a polyurethane made using a polyethylene oxide condensate only. (PX-2, 660a, 665a, 668a; PX-5, 697a, Col. 3, lines 10-11, 16, 28-29; DX-C, 846a; DX-L, 933a; 375a-377a)

General reasons that because alkylene oxide by definition includes both propylene oxide (as claimed in Heiss) and ethylene oxide (as disclosed in Windemuth), Windemuth and Heiss are one and the same. Therefore, General argues, Windemuth anticipates Heiss under 35 U.S.C. §102(e).⁹ This is not so.

A. THE DIFFERENCE BETWEEN ETHYLENE OXIDE AND PROPYLENE PER SE IS NOT CONTROLLING.

In this litigation, the distinction between Heiss and Windemuth deals with polyurethanes made in part from triol or tetrol condensates of ethylene oxide and propy-

⁹ The District Court made all of the findings necessary for Heiss to antedate the Windemuth patent in order to remove it as *prior art*. (30a) General erroneously asserts that Heiss is entitled to claim only his date of reduction to practice (September 19, 1952) for purposes of antedating the Windemuth patent which has an effective date of May 6, 1952. However, the law is clear that Heiss can rely on his conception date (November 14, 1951) to avoid the Windemuth patent.

Heiss could not antedate the Windemuth patent in the Patent Office as to the claims here in issue because it was not necessary in view of the Examiner's opinion that the Windemuth patent did not render the Heiss patent claims unpatentable. The District Court did not have to decide this issue in view of its like holding that the Heiss patent claims are valid over the Windemuth patent. (23a, n. 12; 24a-27a) But, if Windemuth could be considered an invalidating reference, it cannot be used because Heiss was first.

lene oxide, not ethylene oxide or propylene oxide *per se* as General's arguments would have this Court believe. The condensates, not merely ethylene oxide or propylene oxide, are reacted with the diisocyanate to obtain urethane products. (388a) The District Court recognized this in its findings:

"Instead of an ethylene oxide *condensate* with [at least] two hydroxyl groups, Heiss' invention calls for a propylene oxide *condensate* with three or four hydroxyl groups." [Emphasis added.] (24a)

B. THE EXPRESSION "ALKYLENE OXIDE" IN WINDMUTH IS NOT NECESSARILY IPSO FACTO A DISCLOSURE OF PROPYLENE OXIDE.

General in its brief states:

"The evidence here compels the conclusion that propylene oxide is explicitly taught in Windemuth by the teaching of the use of alkylene oxide as if propylene oxide were specifically named." (p. 17)

General and its expert, Dr. Mark, at trial, have chosen to ignore significant portions of the Windemuth patent. What they did instead was to pick and choose parts of the Windemuth patent and lump them together in a manner not used by Windemuth in an attempt to show obviousness. In this same manner counsel for General cross examined Dr. Colburn on the Windemuth patent (424a, 427a, 428a). However, the line of questioning ended with the following:

"Q. That gives him the idea, does it not?

A. No, it doesn't give him the idea. It just tells him that it is known that alkylene oxides in general take part in a certain chemical reaction. They have the same chemical property and if one of them reacts, the others, will, but it doesn't give him the idea to use any particular one." (428a-429a)

On direct when Dr. Colburn was permitted to testify as to the entire disclosure of Windemuth (375a-378a) he stated that:

"Everything in this patent shows that he is dealing (780) with products which are affected by water so it appears that he never even had the propylene oxide product in hand. All his comments show ethylene oxide. The properties of these products that he is talking about in general, which may be he referred to in general as alkylene oxide products, really are the properties of the ethylene oxide products.

The polypropylene product itself is not disclosed."
(377a)

It is clear that Judge Carter chose to believe Jefferson's expert, Dr. Colburn, rather than General's expert, Dr. Mark when he found:

"That Windemuth had in mind only ethylene and did not know or recognize the special qualities of propylene oxide is made clear by the fact, however, that throughout the patent disclosure reference is made to the finished product as 'dissolving in cold water'; 'generally insoluble in water'; 'swell[ing] on contact with water'; 'distinguished by a remarkable swelling behavior.' (24a)

Thus, the only remaining bit of information upon which General can rely is testimony that according to chemical *definition* "alkylene oxide" (a genus)¹⁰ includes both ethylene oxide (a specie) and propylene oxide (a specie). This cannot be disputed. However, *a definition is not the same as a disclosure*. The question is whether or not one

¹⁰ There are other "alkylene oxides" than ethylene and propylene oxide. (139a, 356a)

skilled in the art would be told by reading Windemuth that propylene oxide was embraced within its teaching.

As was stated by the Court in *In re Luvisi*, 342 F.2d 102, 107 (C.C.P.A. 1965):

"But an expression which includes numerous species does not necessarily, ipso facto 'disclose' each and every one of those species. As so aptly stated by appellants, 'It is possible for a patent to *include* a wide variety of subject matter but at the same time *not to disclose a particular* subject matter' [Emphasis ours] . . . Our approach to this question is to ask whether or not it can fairly and reasonably be said that one of ordinary skill in this art through a reading of the *entire* reference has constructive possession of *the thing itself*, as opposed to possession of mere *language* which *embraces* the name of that thing." [Original emphasis].

Judge Carter correctly found that the Windemuth patent did not disclose a propylene oxide condensate. Therefore, there can be no anticipation under 35 U.S.C. §102(e).¹¹

POINT IV

THE HEISS INVENTION IS NOT OBVIOUS FROM THE PRIOR ART

General contends that the Heiss patent is invalid under 35 U.S.C. §103 as being obvious in view of Windemuth taken by itself or in combination with Sokol or in view of the combination of the Bayer article and the Hill patent. After determining the scope and content of the prior art, ascertaining the differences between the prior art and the Heiss invention, and establishing the level of ordinary skill in the art as prescribed in *Graham v. John Deere Co.*,

¹¹ To meet this, General in effect has combined Windemuth and Sokol. A combination of references *cannot* be used for anticipation under §102.

383 U.S. 1 (1966), the District Court held that the Heiss patent was not obvious in view of this exact prior art. (20a) In addition to the prior art, the District Court also considered the properties of the material made according to the Heiss invention and the commercial success enjoyed by the Heiss invention. (15a, 25a-28a)

A. USING PROPYLENE OXIDE IS NOT OBVIOUS FROM WINDEMUTH'S DISCLOSURE OF "ALKYLENE OXIDE".

The polyurethanes made by using the ethylene oxide condensates of Windemuth do not render the propylene oxide condensate polyurethanes of the Heiss patent structurally obvious. As was pointed out earlier, the condensates are quite different from one another. (387a-388a) In fact the structures of the two condensates are very dissimilar.

The Heiss propylene oxide polyurethane, taken as a whole, and including its properties, would not have been obvious to a person of ordinary skill in the art at the time the invention was made (1951) even if he knew about the teaching of the Windemuth patent.¹² The District Court found:

"As has been indicated above, prior art had advanced from development of polyester based urethanes to polyether based urethanes by the time of the Heiss

¹² By way of footnote, General states in its brief that Jefferson's expert, Dr. Colburn, conceded the obviousness of the Heiss invention in view of the combination of Windemuth and Sokol. A reading of the record (424a-425a) will show no such concession was made. The District Court who heard the testimony of Dr. Colburn found with respect to Sokol: "It is true his patent calls for a propylene oxide condensate, but it had nothing to do with the production of urethanes; . . ." (25a)

invention. Polypropylene oxide based urethanes being less subject to water sensitivity and crystallization than ethylene oxide based urethanes rendered the former an advance in the art. Yet, since propylene is a homolog of ethylene, the question to be answered is whether it was not obvious on reading Windemuth to a person of ordinary skill in the art that the development of propylene oxide based urethane would follow as a next logical step. I find that the water resistant properties of polyether propylene oxide based urethanes which give them the great commercial superiority over polyether ethylene oxide based urethane would not have been obvious to one of ordinary skill in the art at the time of the Heiss application."

"Propylene glycols up to a molecular weight of 750 are soluble in water. Thereafter, water solubility decreases. To substitute propylene oxide condensate for an ethylene oxide condensate and thereby conquer the problem of water sensitivity, therefore, was not clear. A person of ordinary skill in the art at the time of the Price, Heiss experiments would, it seems to me, reach the conclusion that there was no distinction in reference to water sensitivity and hydrolysis between using ethylene and propylene." (26a-27a)

In support of its finding, the District Court relied on the admission by Dr. Price of the unexpected properties of the Heiss invention and the fact that those most skilled in the art failed to make the Heiss invention. The District Court stated:

"In a speech, 'How Chemists Create a New Product', he gave on February 2, 1961 published in the April, 1961 issue of 'The Chemist', at pages 131, 133, Dr. Price said:

'While the claims [of the Windemuth patent] cover all poly (alkylene oxides), the disclosure and examples mention only poly (ethylene oxide). These German chemists [Windemuth, Schnell and

Bayer] were working in a laboratory which led the world in developing polyester polyurethanes. In a patent filed over two years after our conception and reduction to practice, they had clearly failed to recognize the significant advantages of the propylene oxide unit over the ethylene oxide unit in decreasing water sensitivity and crystallization.'

'If the significance of propylene oxide in this respect was not recognized by Bayer, Windemuth and Schnell, who could hardly be classified as men of mere 'ordinary skill,' it is difficult for me to give credence to a contention that an ordinary journeyman would have understood that propylene oxide had these unexpected qualities in 1950 and 1951.'" (27a-28a) [footnote omitted]

It was proper for the District Court to rely on superior properties or uses in considering the issue of obviousness. This is in accord with the prevailing law. See *Commissioner of Patents v. Deutsche Gold-und-Silber-Scheideanstalt Vormals Roessler*, 397 F.2d 656 (D.C. Cir. 1968); *In re Murch*, 464 F.2d 1051 (C.C.P.A. 1972); *In re Papesch*, 315 F.2d 381 (C.C.P.A. 1963) and cases cited therein.

B. THE PRIOR ART OF BAYER AND HILL DOES NOT MAKE THE HEISS INVENTION OBVIOUS.

The Bayer article is directed to early German work in the polyurethane field and relates almost exclusively to making polyester urethanes by reacting (1) a polyester condensate; with (2) diisocyanate. (PX-7B, 707a; 368a, 380a, 441a-443a) There is no mention of polyether propylene oxide condensates. (143a-144a) Judge Carter found:

"Dr. Bayer was, I gather, if not the father, one of the earlier inventive geniuses of the polyurethane industry which had its beginnings in Germany in 1937

with the development of polyester based urethanes. Bayer's great contribution was the teaching of a method of cross linking by use of diisocyanates thereby rendering polyester based urethane products more durable. Foams and adhesives were made by this process. The problem was that polyester urethanes were subject to destruction by hydrolysis. Moreover, diisocyanates, which were the most expensive ingredient, were required in large quantities and therefore the finished product was too costly for extensive commercial exploitation." (22a-23a)

The Hill patent is directed to making polyurethanes by reacting (1) a *polyether diol* condensate; with (2) diisocyanate. There is no mention of a *polyether triol or tetrol* condensate which is needed for cross linking in the Heiss invention. (145a; 369a-370a; 381a-383a)

Judge Carter made the correct finding that:

"... the Hill Patent cannot be considered prior art; although he utilized a propylene oxide condensate, he obtained cross linkage through an entirely different process." (25a)

In its brief, General states:

"Thus, the only difference between the Heiss claims and Bayer is the use of propylene oxide backbone in the polyol.

"The Hill patent (PX 9, 740a) supplies the missing link. It expressly teaches the use of the propylene oxide backbone in polyols for polyurethane reactions." (p. 22)

General misrepresents Bayer in alleging that the "only difference" from the Heiss claims is that Bayer does not disclose propylene oxide. This is far from correct. Bayer does not disclose *any* condensate of *any* alkylene oxide (propylene or ethylene oxide) with *any* triol or tetrol.

General admits that Windemuth is a better reference than the Bayer article. (DX-AK, 1059a) Heiss' propylene oxide condensate invention is even further removed from the Bayer article than it is from the Windemuth patent. Thus, there is much more than just a missing link between the Bayer article and the Heiss invention. There is a huge gap.

Hill does not fill the huge gap left by Bayer. Hill does not disclose a propylene oxide condensate of a triol or tetrol as required by the Heiss invention.

In addition, it is obvious that the District Court considered these references in combination. (22a, 25a)

Thus, based on evidence, both oral and documentary, the District Court concluded "... that the Heiss Patent meets the test of obviousness under 35 U.S.C. §103." (28a) General has presented no showing that this conclusion is erroneous nor that the findings on which the conclusion is based were clearly erroneous. The findings are fully supported by the evidence.

C. THE CARTER-WALLACE CASE IS INAPPLICABLE.¹³

General would have this Court believe that the District Court erred in relying on the disclosed superior properties exhibited by Heiss's propylene oxide based urethanes in concluding that the Heiss invention is not obvious. General relies on *Carter-Wallace, Inc. v. Otte*, 474 F.2d 529 (2d Cir. 1972) *cert. denied* 412 U.S. 929 (1973) for this contention.¹⁴

¹³ Jefferson is discussing Point I of General's brief here because it is really part of General's §103 defense.

¹⁴ General does not directly attack the sufficiency of the Heiss patent disclosure insofar as one skilled in the art could reproduce the invention.

At the trial of this case, *Carter-Wallace* was called to the attention of the District Court by Counsel for General. Judge Carter stated that he had read *Carter-Wallace* in preparation for the trial (Trial Transcript, p. 944) so he was well aware of *Carter-Wallace* during trial and at the time of his decision.

Unlike *Carter-Wallace* the Heiss patent discloses numerous uses including the present commercially successful use for the claimed Heiss invention. Further, unlike *Carter-Wallace*, the Heiss patent discloses the superior properties of the claimed Heiss invention. Based on the facts of this case, it is submitted that *Carter-Wallace* is inapplicable and that the District Court's opinion is fully supported.

1. The Heiss Patent Specification Fully Complies with the Law.

In its argument, General intimates a deficiency in the Heiss Patent specification with respect to the disclosure of the use of the Heiss invention. This is an attempt by General to read into *Carter-Wallace* significant overtones of lack of disclosure within the meaning of 35 U.S.C. §112. All that the first paragraph of §112 requires is that:

“The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.”

The Heiss Patent specification includes everything that is necessary under §112, first paragraph, and General does not dispute this. The public has been apprised as

to how to use this invention. Dr. Mark, General's expert witness, agreed that the Heiss patent fully discloses the beneficial uses of the Heiss invention. (138a) The District Court, therefore, found that:

"The patent in question involves processes for making various polyurethane products such as adhesives, sealants, protective coatings and foams. The process for making foams by reacting a condensate of propylene oxide and a polyol such as pentaerythritol having three to four hydroxyl groups with an excess of diisocyanates, is the invention with which this controversy is concerned." (16a)

2. The District Court's Approach Is Not Inconsistent with the Underlying Rationale of *Carter-Wallace*.

This Court in *Carter-Wallace* reasoned that the purpose of the specification as required by the first paragraph of 35 U.S.C. §112, was to give something useful to the public after a patent expires and becomes part of the public domain. That is, the specification is part of the consideration for the seventeen year monopoly. Thus, if a use or property made a composition of matter patentable, then that use or property should be included in the specification. Otherwise the public gains nothing.

General would extend the holding of *Carter-Wallace* to not only require the recitation of a use or property but, in addition, require an explanation regarding why the invention works better, i.e. the property's superiority. This is a clear departure from *Carter-Wallace*.

In other words, the "how" is required by 35 U.S.C. §112 but never in statute or case law has there been a requirement of "why". In fact, it is a well settled principle of patent law that an inventor does not have to understand why his invention works the way it does. As this Court

stated in *Standard Coil Products Co. v. General Electric Company*, 306 F.2d 319, 323 (2d Cir. 1962):

"It is not necessary that an inventor understand all scientific principles involved in the device or process patented. *General Motors Corp. v. Swan Carburetor Co.*, 6 Cir. 88 F.2d 876, certiorari denied 302 U.S. 691, 58 S.Ct. 49, 82 L.Ed. 534; *Union Oil Co. of California v. American Bitumuls Co.*, 9 Cir 109 F.2d 140; 2 *Walker on Patents* §253 (Deller Ed. 1937). Failure to disclose or even grasp the full theoretical basis of an invention will not invalidate an otherwise valid patent if knowledge of such data is not necessary to the successful operation of the process or construction of the device.

"For a patent to be valid, however, it must adequately disclose the invention which has been made. The test of whether disclosure is adequate is an operational one; the description must be of sufficient clarity so that one skilled in the art or science involved could make and use the invention. 35 U.S.C. §112; *A. B. Dick Co. v. Barnett*, 2 Cir. 288 F. 799. Thus a failure to set forth the correct electronic principles governing the operation of the interstage coupling would not invalidate Nelson's patent if an ordinarily skilled television engineer could on the basis of the patent construct an operating cascode amplifier embodying Nelson's discovery."

Heiss, unlike the inventor in *Carter-Wallace*, paid his consideration for the privilege of a monopoly. Thus, *Carter-Wallace* is inapplicable and the District Court was correct in holding the Heiss patent valid.

3. The District Court Did Not Err as a Matter of Law in Finding that the Heiss Invention Was Not Obvious.

As a matter of law, the District Court's opinion is supportable on two independent grounds. One ground was

based on the fact that the Heiss patent was unobvious without reference to any evidence regarding the superiority of the Heiss polyurethanes. The District Court found that the specific teachings of the most pertinent prior art (the Windemuth patent) lead away from the Heiss invention because the Windemuth polyurethanes are water swellable while the Heiss polyurethanes are water resistant. The District Court said:

"A person of ordinary skill in the art at the time of the Price, Heiss experiments would, it seems to me, reach the conclusion that there was no distinction in reference to water sensitivity and hydrolysis between using ethylene and propylene." (27a)

The case of *In re Lunsford* 357 F. 2d 385 (C.C.P.A. 1966) is particularly in point. In *Lunsford*, the Patent Office had rejected claims directed to a compound which was an antispasmodic in the intestines. The prior art references disclose structurally similar compounds the closest of which was an antispasmodic in the stomach and duodenum that was specifically noted to be ineffective as a lower intestinal antispasmodic. This evidence without more was considered to be sufficient to show patentability. Thus, evidence showing the superiority of the compound was deemed unnecessary. The Court held:

"Moreover, the record shows that this is not the type of case under 35 U.S.C. §103 where affidavits are needed. The prior art taught that the ethyl-piperidyl form of compound was effective as an antispasmodic for the stomach and duodenum. Appellant therefore did not have to submit evidence that the potency of the claimed compounds was unexpectedly superior to the potency of the prior art compounds in the intestines. He was entitled to rely on the fact that the most specific teachings cited by the examiner, uncontradicted by the art of record, led away from what appellant claimed." [footnote omitted]. (357 F.2d at 392)

The instant case is even stronger than *Lunsford*. Here Windemuth, purportedly speaking about *all* alkylene oxide condensates, led away from what Heiss claimed. More specifically, the Heiss patent specification states that the invention disclosed therein would be useful as "adhesives, protective coatings, components and insulating varnishes, impregnants for fibrous materials, . . . insulating and dielectric elements in transformers, capacitors, electric terminals or bushing, cables or other electric devices . . ." (PX-1, 501a, Col. 1, lines 15-22) Who would want water soluble or swellable products of the type set forth in the Heiss patent specification? Accordingly, it is easy to see why one skilled in the art would be specifically led away from the Heiss invention after reading the Windemuth patent. Therefore, under the law, it was unnecessary for Judge Carter to even consider the testimony as to the superiority of polyurethanes made from propylene oxide condensates.

However, Judge Carter went even further and considered a second ground for nonobviousness of the Heiss invention. He found the patent disclosed the uses of the Heiss polyurethanes and its water resistant property. (16a) Based on that finding, he considered the evidence of superiority and concluded that superiority had been established and that the Heiss invention was also valid on that basis. Contrary to General's contention, the law is clear that evidence of the superiority of a disclosed property can be relied upon. *In re Zenitz*, 333 F.2d 924 (C.C.P.A. 1964), and *In re Khelghatian*, 364 F.2d 870 (C.C.P.A. 1966).

This is not a case where a use or property is not disclosed as in *Carter-Wallace*. It is a case of whether or not evidence of superiority is admissible in arguing for patentability. The Court in *Zenitz* said it is:

"The present facts are to be distinguished from those in the several cases cited by the solicitor to support the contention that appellant is not in a favorable position to urge undisclosed properties as a ground for establishing unobviousness. One of these cases, *In re Herr*, 304 F.2d 906, 907, 50 C.C.P.A. 705, involved certain testosterone derivatives. The affidavit presented evidence of oral anabolic and androgenic activity. The specification was devoid, however, of any mention of such activity for the compounds and the sole utility disclosed in Herr's specification was that the compounds were useful intermediates in the making of other compounds which had anabolic and androgenic activity. It is readily seen that if the disclosure of Herr was followed the compounds would be used as intermediates and no benefit from their anabolic and androgenic activity would flow from such use. Here, Zenitz disclosed a tranquilizer and subsequently established that if it is used as a tranquilizer it is a better one for it minimizes the side effects of hypotensive activity. Therefore we think the latter property must be considered in determining the patentability of the claimed compound."

The same distinction is applicable here. According to the only applicable law regarding disclosed properties, the District Court properly considered evidence of the Heiss superior water resistance exhibited by the Heiss polyurethanes.

Therefore, based on either *Lunsford* or *Zenitz*, the District Court was correct, as a matter of law, in concluding that the Heiss patent is unobvious.

POINT V**IT WAS IMPOSSIBLE FOR HEISS TO HAVE
DERIVED HIS INVENTION FROM PRICE ¹⁵**

The fatal flaw in General's argument is that prior to the issuance of the Price patent, the Heiss patent application had claims drawn to alkylene oxide condensates which cover propylene oxide condensates. (PX-2, 571a, 578a, 344a-346a) The specification discloses propylene oxide condensates and always did from the beginning.

The statement of the case shows that after the Price patent issued, Heiss copied Price's claims to provoke an interference with Price. But Heiss had to do this in order to provoke an interference with the already issued Price Patent. Rule 205(a) of Rules of Practice for the United States Patent Office provides:

"(a) Before an interference will be declared with a patent, the applicant must present in his application, copies of all the claims of the patent which also define his invention and such claims must be patentable in the application. However, an interference may be declared after copying the claims excluding an immaterial limitation or variation if such immaterial limitation or variation is not clearly supported in the application or if the applicant otherwise makes a satisfactory showing in justification thereof."

¹⁵ The reason why Jefferson chooses to make a separate point regarding Heiss' alleged derivation of the invention from Price is that it has little to do with priority under 35 U.S.C. §102(g). Instead derivation is defined in 35 U.S.C. §102(f) which requires the inventor to be the original inventor.

Judge Carter recognized this Rule and found that Heiss did not derive from Price.

"As I understand the procedure, Saunders and Heiss were asserting, by copying the Price claims, that the Price Patent and their application were to the same invention, and since their application had been filed before that of Dr. Price, that their application should be accorded priority; in effect, that the issuance of the Price Patent should be rescinded, and a patent issued to them." (26a, n.6)

The District Court saw through General's argument for what it really is: an argument based on a vague nonexistent nonstatutory doctrine of late claiming. The District Court stated:

"General argues that the Heiss claims were triggered by knowledge of the issuance of the Price patent; that the claims which are in issue here were first made a part of the Heiss application on February 6, 1959. Therefore, the nonstatutory doctrine of late claiming is urged as rendering the patent invalid and/or as entitling the claims to date only from the time when they were added to the application (February 6, 1959), rather than the date the application was filed. The rules of the Patent Office provide for 'cancelling particular claims' and 'presenting new claims' (Patent Office Rule 119). These claims, when allowed, take the original filing date of the application, even where there has been an intervening public use before the amendment has been made. See *Coats Loaders & Stackers, Inc. v. Henderson*, 233 F.2d 915, 924 (6th Cir. 1956); *King-Seeley Thermos Co. v. Refrigerated-Dispensers, Inc.*, 354 F.2d 533 539 (10th Cir. 1965). Moreover, the law seems settled, in the absence of some countervailing showing not made here, that the effective date of the claims of the continuous applications are those of the original application. General's argument in this regard is, therefore, rejected." [footnotes omitted] (30a-31a)

As long as an applicant complies with the Patent Laws regarding when an amendment to the claims can be made, there is nothing wrong. *Overland Motor Co. v. Packard - Motor Car Co.*, 274 U.S. 417, 423-4 (1927). See also *United States v. American Bell Telephone Co.*, 167 U.S. 224 (1897); *Muncie Gear Works, Inc. v. Outboard Marine & Mfg. Co.*, 315 U.S. 759 (1942).

There has been no showing by General that the Heiss application was prosecuted in any manner except by the dictates of the Patent Laws and the Patent Office Rules. Accordingly, the District Court's findings regarding derivation from Price are fully supported by the evidence and correct.

POINT VI

THE PLASTICIZER IS NOT AN ESSENTIAL COMPONENT OF THE HEISS INVENTION

The Heiss Patent does not require a plasticizer and both Judge Carter and the Patent Office recognized this. In fact, in this regard, Judge Carter called attention to the long and careful prosecution before the Patent Office. (20a, 22a n.11) This Appeal constitutes the *third time* General has raised this particular issue. No tribunal has agreed with General so far. There is no evidence to support a contrary result here.

A. HEISS SEPARATELY PATENTED A THREE COMPONENT PLASTICIZER INVENTION.

General argues that Heiss must have thought the plasticizer, i.e., the three component system was important because he obtained foreign patents claiming the system based on the U.S. application. Of course, this was important—Heiss obtained a United States Patent¹³ cover-

¹³ United States Letters Patent No. 3,143,517. (306a, 308a)

ing his three component system. But this has no relevance to the instant case. All this shows is that Heiss thought his three component system was also an invention.

B. HEISS ALWAYS KNEW THE SIGNIFICANCE OF A PLASTICIZER.

General's position that Heiss never invented the two component system of the Heiss patent claims is untenable. Chemists commonly conduct chemical reactions in the presence of a solvent. (80a, 123a, 134a, 191a, 194a-195a, 207a) A plasticizer is a solvent which is merely an inert ingredient which does not take part in a chemical reaction. (71a, 123a-124a; 134a, 189a-194a, 237a-238a, 295a-296a, 382a-383a)

Prior to his reduction to practice of the propylene oxide condensate polyurethanes, Heiss already had considerable experience in making the two component system with other materials including the Windemuth materials. Heiss had also worked with plasticizers in those other materials. Heiss knew what the role of the plasticizer was and he knew that it had no effect on the reaction. (296a) His purpose in reacting the propylene oxide condensates in the presence of Aroclor was to solidify the Aroclor plasticizer, and that he did on September 22, 1952. (294a-296a)¹⁷

Obviously, the third component is unnecessary and can be omitted. General realizes this but nonetheless attempts to make this Court believe otherwise.

¹⁷ Before Heiss reacted a propylene oxide condensate in the presence of a plasticizer, he reduced his invention to practice in a benzene solution (not a plasticizer) in order to make an adhesive. (DX-AC, 979a; 294a) General contends this experiment was a failure because the adhesive solidified. However, Heiss' adhesive was not a failure and there is no evidence in the record to support General's contention. Many adhesives solidify and, in fact, they function as adhesives because they do solidify.

C. THE HEISS SPECIFICATION ALWAYS STATED THAT THE INVENTION DID NOT REQUIRE A PLASTICIZER.

In the Heiss specification it is clearly stated that the use of a plasticizer is merely optional. (PX-1, 502a, Col. 3, lines 68-75; 382a-386a) The Examiner had decided this very issue against General in the *Price v. Heiss* interference when he denied the motion to dissolve.

"A reading of the Heiss specification clearly indicates that the plasticizer need not be present when the polyurethane adduct is actually formed. The use of a plasticizer is considered not critical. For example, at page 7, lines 1 to 7, Heiss states that the polyurethane adducts may be preformed and then added to the non-reactive organic liquid (plasticizer) At page 18, lines 17 to 22 it is stated that the polyurethane is desirably prepared in the presence of a nonreactive organic plasticizer. A desired use is considered not to be critical. Obviously the plasticizer is not essential to the reaction of the condensation product and the isocyanate. Furthermore, as pointed out by Heiss, the counts of the interference and the claims of the Price patent are open claims—they do not exclude the use of a plasticizer. It should be noted, also, that when Price reacts the diisocyanate with the condensate, said reaction is carried out in the presence of a high boiling non-reactive organic solvent, which is not removed at the termination of the reaction." (DX-J, 924a-925a)¹⁸

The District Court agreed. (20a)

¹⁸ General's prior position with respect to its Price patent belies its present position on Heiss regarding the essentiality of a plasticizer. In the Price patent, General sought and obtained two component claims based on a specification which disclosed only one working example of the claimed reaction and that example contained a plasticizer, i.e. a three component system. (DX-A, 839a; 133a-134a, 226a, 240a-241a)

**D. THE PROSECUTION HISTORY SHOWS THAT
HEISS NEVER ABANDONED PURSUING HIS
TWO COMPONENT INVENTION.**

General's argument would almost make one believe that it has not read the prosecution history of the Heiss patent application. As explained here in the Statement of the Case, the original claims of the Heiss application covered the two component system. With the exception of a short hiatus (March 1957 to January 1958) Heiss always had two component claims in his application. (PX-2, 507a-552, 569a-673a, 344a-346a) Jefferson will treat General's points *seriatim*.

First, General alludes to written comments made by Dr. Saunders relating to the patentability of the Heiss patent application claims at the time when Heiss' and Saunders' joint invention was still being claimed. Saunders' comments relate only to the patentability of broad claims which were later removed from the case. The claims now in issue are not the claims to which Saunders referred. Saunders is not a patent lawyer and not an expert on patentability and is not an inventor in the Heiss patent. Thus, any comments made by Saunders are of no moment.

Second, with respect to the quote taken from a response to the Office Action dated October 7, 1954, General misrepresents what the quote conveys. This quote has no relevance to the two component Heiss patent claims.

Third, in the response to the Office Action of March 12, 1957, Heiss' attorney was arguing that, in the three component plasticizer claims then present in the case, the plasticizer must be added to the reactant *before* the reaction between the other two components takes place, i.e., before the polyurethane solidifies. The plasticizer cannot be added *after* the reaction because it cannot be mixed with the al-

ready solidified polyurethane. In short, Heiss' attorney was arguing with respect to the patentability of the three component claims—not the two component claims. (PX-2, 560a)

Finally, General quotes from one portion of the response dated January 27, 1958. (PX-2, 583a) However, General fails to quote another portion of the same response relating to the two component alkylene oxide claims then pending:

“Claims 35 and 36 are directed to a polyurethane prepared from the condensation product of an alkylene oxide and an organic trihydroxy compound and an excess of isocyanate or thioisocyanate. This product is disclosed as a *preferred embodiment* in several of the working examples and elsewhere in the specification. Claims 53 and 54 cover the process of making the product.” [Emphasis added] (PX-2, 587a)

E. THE LAW DOES NOT REQUIRE THE HEISS PATENT CLAIMS TO INCLUDE PLASTICIZER.

The plasticizer is not required for the reaction disclosed in the Heiss patent and the law does not require it to be present in the claims because it is merely optional. *A. S. Boyle Co. v. Siegal Hardware & Paint Co.*, 26 F.Supp. 217 (D. Mass. 1938).

General cited *Wilcox Mfg. Co. v. Eastern Gas & Fuel Associates*, 400 F.2d 960 (4th Cir. 1968), *cert. denied* 393 U.S. 1051 (1969) as authority for holding the Heiss patent invalid under 35 U.S.C. §112. The case is inapposite because unlike the Heiss patent, the patentee in *Wilcox* stated in his specification that the “reciprocation” was essential. Thus, the specification in *Wilcox* did not support the claims. In the present case, the Heiss patent clearly states that the use of the plasticizer is optional.

U. S. Industrial Chemicals Co., Inc. v. Carbide & Carbon Chemicals Corp., 315 U.S. 668 (1942), is also inapplicable to the present facts. In *U.S. Industrial Chemicals*, the Court stated:

“Various options or alternatives are mentioned in the specifications, but nowhere in them, or in the claims, is the introduction of water treated as optional or permissive. The District Court made no finding directed to this fact, but the court below definitely holds, and we agree, that, in the process defined in the original patent, the voluntary introduction of water into the reaction chamber is mandatory.” (315 U.S. at 673)

Unlike *U.S. Industrial Chemicals*, the Heiss patent states that the plasticizer is optional and the District Court made findings in accordance with this fact. (20a) In addition, the inventor in *U.S. Industrial Chemicals* attempted to broaden his invention whereas Heiss kept on narrowing his two component invention.

POINT VII

THERE IS NOTHING IN THE RECORD TO REMOTELY SUPPORT GENERAL'S REQUEST FOR ATTORNEY'S FEES

There are no findings by the District Court on which this Court could base an award of attorneys' fees in favor of General. The points General raises in support of its request for attorney's fees are nothing more than unfounded self-serving assertions without any basis whatsoever in the record. General's points will be discussed *seriatim*.

1. With respect to the plasticizer issue, see Part VI, *supra*, of this brief and the District Court's opinion at p. 20a.

2. Heiss copied the claims from the Price patent not the invention. In any event Heiss scrupulously followed the Patent laws and the Patent Office Rules. See Part V, *supra*, of this brief and the District Court's opinion at pp. 30a-31a.

3. The statement by General that the argument Heiss' patent attorney made was consciously misleading is false. There is a clear finding by Judge Carter against General on this point:

"Plaintiff argues that since alkylene oxide includes both ethylene and propylene the Heiss argument during the prosecution of his application that Windemuth disclosed only ethylene oxide misled the examiner, and therefore, the patent ought to be invalidated. That argument has no merit. A patent may be invalidated or its validity undermined if the applicant misleads the Patent Office, see, e.g., *Monsanto Company v. Rohm and Haas*, 312, F. Supp. 778 (E.D. Pa. 1970) *aff'd* 456 F.2d 592 (3rd Cir.), *cert. denied*, 407 U.S. 934 (1972). The yardstick, however, is whether the patentee has failed to give the Patent Office some vital information in connection with his application or has provided information in respect thereto which is erroneous or false. Nothing of that sort occurred in this instance. Heiss argued that Windemuth disclosed only ethylene oxide. The examiner had the Windemuth Patent before him; he knew, as an expert, that technically alkylene oxide embraced propylene, as well as ethylene oxide, but read the patent as in reality disclosing only ethylene oxide. He was not misled or misinformed; the examiner merely agreed with Heiss' contentions." (24a, n. 13)

CONCLUSION

For the reasons set forth, the judgment of the District Court should be affirmed.

Respectfully submitted,

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March 15, 1974

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JJC:rlh

UNITED STATES COURT OF APPEALS
FOR THE SECOND CIRCUIT

-----X
THE GENERAL TIRE & RUBBER COMPANY, :

Plaintiff-Appellant, :

v. :

Docket No. 74-1050

JEFFERSON CHEMICAL COMPANY, INC., :

Defendant-Appellee. :

-----X
AFFIDAVIT OF SERVICE

STATE OF NEW YORK)

) ss:

COUNTY OF NEW YORK)

JOHN F. BOYLE, being duly sworn, deposes and says:

That he is over 21 years of age and is in the employ of Kane, Dalsimer, Kane, Sullivan and Kurucz, attorneys for the Defendant-Appellee, and is not interested in any manner in the outcome of the within litigation.

That on March 15, 1974, he personally served at least two copies of the BRIEF FOR DEFENDANT-APPELLEE by delivering the same to Plaintiff-Appellant's attorneys, Watson, Leavenworth, Kelton & Taggart, at their offices at 100 Park Avenue, New York, New York.

Subscribed and sworn to before me
this 18th day of March, 1974.

Notary Public

PIERCE, FENNER & SMITH
NOTARY PUBLIC, New York
City
Commission Expires March 1975

UNITED STATES COURT OF APPEALS
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THE GENERAL TIRE & RUBBER COMPANY,

Plaintiff-Appellant,

v.

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Defendant-Appellee.

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